Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital. Welcome to Yale Cancer Answers with your host, Doctor Anees Chagpar. Yale Cancer Answers features the latest information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer. This week, it’s a conversation about innovations in the treatment of prostate cancer with Doctor Isaac Kim. Doctor Kim is professor and chair of Urology at Yale School of Medicine, where Doctor Chagpar is a professor of surgical oncology. Maybe we can start off by you telling us a little bit more about yourself and what you do. I am a urologic oncologist with my clinical practice and research specifically focused around prostate cancer. And to that end my surgical expertise is robotic surgery or minimally invasive surgery. This is where surgeries are performed through very small or multiple single hole incisions. The advantage is the patients recover faster and they go home a lot quicker and as a result are
able to get back to activity a lot quicker as a result of the surgery. So we’re going to dive into a little bit more of the surgical innovations, but maybe we can take a step back and talk a little bit more about prostate cancer in general. Tell us a little bit more about prostate cancer.

It seems to be pretty common, but these days not everybody is getting screened. There are different screening modalities and not everybody who even gets diagnosed with prostate cancer needs surgical management. So can you kind of lay the groundwork for us on what exactly is prostate cancer? How common is it?

Who should get screened, and how? Yes, silver again, that is actually a loaded question because as you’ve alluded to. There is not an agreement amongst all the experts in the field, so I’ll just be able to go over some of the general guidelines, but at the end the most important thing for any men with any sort of prostate issues, it’s really important to have an
established relationship with the urologist to discuss these issues, and this is also called the concept of shared decision making where the patients do have a say in whether they're going to undergo prostate cancer screening or not. Or not, but just to give you an overall, you know like a 10,000 feet view of prostate cancer, it is the most common form of cancer in men. Besides skin lesions or skin tumors. The estimated number of men who are going to be diagnosed with prostate cancer in this year or in 2022 is a little less than 300,000. All of these men, or of the men who are diagnosed with prostate cancer, approximately 34,000 men are expected to die from the disease, so just based on the statistics, 30,000 men is not a very small number. It's not a small number. In fact, that's a very large number compared to the number of men who are diagnosed with the disease. The death rate is quite low and herein lies the controversies and debate around whether every man
needs to be screened for prostate cancer. And this is true. Most men who are diagnosed with prostate cancer at all will not die from the disease because our human is very good these days, as well as a lot of the prostate. Cancers are indolent or they will not hurt the patient if left alone. The controversy is in that you know we don’t. As doctors we don’t have that the hindsight right when you have the benefit behind so you can always go back and take a look and say whether this is good or not. Good for the patient. When a patient is contemplating whether we’re going to get a prostate cancer workup done or not, they have to make the best decision based upon the current literature and what the recommendation is. And that guideline is going to be different based on the patient’s age and general health status. So again, this is why it’s important for the patients to have an engaged relationship with a urologist, say well trained urologist.
So, let's dive in a little bit more into the age issue, because I mean certainly your point of their general health status makes sense and is something that we apply across various cancer screening modalities. So if you know you are in a physical health condition such that finding a very small cancer at its earliest stages would be the least of your worries, you may not want to be screened. But age is a different issue. So we've found that, you know, for some cancers now we are beginning to screen people earlier and earlier. Colorectal cancer is a classic example. Or for other cancers, we're stopping screening at particular ages. What's the story with prostate cancer? When should men start having a conversation with their doctor about whether or not they need to get screened? So this is where I'll have a 2 answer for you. One is what our national guideline says and then just based on my experience what I prefer or when I have this shared decision making conversation with my patients. What I suggest or or you know, my inclination. My opinion on this.
So I’ll give you 2 answers. Again the guideline and in my opinion so you know this all goes back to the clinical trials that were conducted to assess whether prostate cancer. Screening makes sense or not for our patients, our men and this is based on a really critical blood test or or called a prostate specific antigen or PSA. It’s a simple blood test. You get drawn in the doctor’s office and then you get a number and based upon that we can risk stratify the patients. Say what’s your risk of having a prostate cancer is and in the past this number has traditionally been somewhere around 3:00 to 4:00 cut off and then patients are asked to undergo biopsies. But again, this is based on many laboratory findings, so in order to assess whether this screening method is effective or not, a large scale or clinical trials have been conducted, one in the United States and the other one in Europe. And what this study at the end suggested was, may not be all that effective,
but in the end it turns out that the studies on some of the studies of the one that was conducted in the states were had a significant contamination. There’s some questions about the scientific validity or the rigorous in which the study design was followed. So at the end, the consensus was that prostate cancer screening still is pretty effective, and that’s, again, that’s what the European data has shown. Nevertheless, you know the issue with that is that the studies were were conducted in men over age older than 55. So in medicine, as you know, we have different levels of evidence we aspire to is a level one evidence. During his effective for men over the age of 55. That said then that doesn’t preclude the fact that prostate cancer screening is still effective or not effective medium younger than
age 55 simply because they are not included in the clinical trials. All right. So I think they’re in lies the dilemma now. So the national guidelines right now still say for most part that prostate cancer screening should be in men over the age of 55 to 865. So again based on these guidelines, that’s what we use, but also the question about them. What about the younger patients, right? What about the men who are at a higher risk such as you know, fathers, brothers having prostate cancer as well as the minorities? You know the the black community does have a significant higher incidence of prostate cancer. So in general, based on the data, what I say what I see is a prostate specific antigen PSA? Still a very very effective tool. So I use that as the initial entry of I would like to establish a baseline level semi around age 40 and based on that level that I think we can start guiding in terms of how intense that follow up or the screening process should be. So for instance if you’re if
you’re at age 40 and you have a PSA level that is less than one, chances of you of that men having a lethal prostate cancer over its lifetime is essentially 0. So for that patient then the terms of the screen intensity, you don’t have to be as as intense as somebody at the age of 40 with a PSA of three or four. So This is why this shared decision making becomes very important. And again, that’s a very good guiding policy in terms of how intense the future follow up should be for that man. When you say intensity, do you mean that if somebody at the age of 40 has a PSA less than one, that they should never get another PSA and somebody who has a PSA of three or four should be screened at least annually? Or is it more frequent? Well, that’s why I soap all again. These are all retrospective data. That said, you know, for someone
whose PSA is less than what age 40.
I recommend getting another check up at age 50 and a 10 year follow-up.
So for someone who’s PSA between 2:00 and 3:00,
or I recommend a PSA check every five years over the age of PSA of three.
I recommend annual checkups, so again, these are just based upon the retrospective data large body.
Suspected that and that they’re not prospectively or they’re not have been validated in a rigorous clinical trial setting,
but my take is, is that the aggressive intervention? May not be helping the patients,
but I think by using this more of a creative approach and really working with the patients,
I think that concern is is mitigated.
There’s a lot less, so I do think again.
Tailoring the the follow up resin based upon the patient’s age as well as the baseline levels or the last previous levels.
I think it’s a good approach to do so.

One other question.

So in terms of screening, what role does Bridget digital rectal exam play?

I mean, are we good with a PSA alone or do we still need to have rectal exams which many men might not really prefer?

There’s another very important critical question that you’re raising, that is a question that I faced not only from Mike and our medical students that we teach here, but also from our colleagues across in our field.

I say this at the end though, or the in terms of statistics.

You know how many prostate cancer can be picked up by a rectal exam on that could not be picked up by PSA. That number is.

Quite low, it’s going to have to be in the single digits, so because of that again the question is, is that for those patients whose PSA or prostate cancer restricted by our digital rectal exam that if you left them alone, eventually the PSA would have declared itself?
So what is really the utility of the rectal exam is the question at hand there, and you know, again, we don’t know the answer 100% for sure, but really at the end what it was. Your Mendez is it really is not a difficult or painful exam, it’s just that it’s it deals with the private parts, you know it has. You know that. The private issues on some patients are reluctant, especially men are reluctant to undergo such an exam, but it’s not a anything that has a a long term complications or any other long term consequences of their exam. It’s is a simple of physical exam. In that sense, in the pelvic exam would be even more complex, so it’s not a. Difficult exempt conduct, so I think once you can overcome that psychological component, in the pelvic exam would be even more complex, so it’s not a.
a patient has been very good at it. So at the end I do stress that rectal exam still is a important part of monitoring patients or screening patients who are potentially at risk for prostate cancer.

Well, we're going to pick up the conversation about prostate cancer and what happens after screening, and what happens? Who needs a biopsy and who gets treated and how?

Right after we take a short break for a medical minute, please stay tuned to learn more about prostate cancer treatment with my guest Doctor Isaac Kim.

Breast cancer is one of the most common cancers in women. In Connecticut alone, approximately 3500 women will be diagnosed with breast cancer this year. But there is hope. Thanks to earlier detection, noninvasive treatments, and the development of novel...
therapies to fight breast cancer, women should schedule a baseline mammogram beginning at age 40 or earlier if they have risk factors associated with the disease. With screening, early detection, and a healthy lifestyle, breast cancer can be defeated. Clinical trials are currently underway at federally designated Comprehensive cancer centers such as Yale Cancer Center and its Milo Cancer Hospital to make innovative new treatments available to patients. Digital breast tomosynthesis, or 3D mammography, is also transforming breast cancer screening by significantly reducing unnecessary procedures while picking up more cancers. More information is available at yalecancercenter.org.

You're listening to Connecticut public radio. Welcome back to Yale Cancer answers. I’m doctor Anish Treg Park and I’m joined tonight by my guest Doctor Isaac Kim. We’re talking about prostate cancer treatment and right before the break we were learning that prostate cancer is very common, but oftentimes is pretty indolent.
We went over who needs a digital rectal exam and who needs a PSA. But my next question for you, Doctor Kim, is this? At what point do you move on to a biopsy? I mean, at what point is a PSA number or a digital rectal examination finding so concerning that it’s time to start looking for a cancer? Yes, so again that is a question or the answer to that is not a simple straightforward answer.

It really depends on the patient’s age as well as his general health status. That said, in general the standard cutoff for PSA, which will trigger a prostate biopsy, is generally around PS 4.0. For patients or younger than age 50 on PSA to 3.0 or I will start monitoring those patients very intensely. And if there’s any sign of their PSA’s rising for those of you, I would actually trigger the biopsy or react. Recommend a biopsy at a much earlier point. On the other hand, if the man is older than age 6570, then you can go up on the PSA to over 6 on 6 1/2 or so. The other sign that would trigger a prostate biopsy.
In my mind, it comes to mind. A patient that I saw a couple of months ago. I actually was seen by a primary doctor just monitoring his PSA, but again this patient's PSA remained low but he started having difficulty with urination. That's why he's referring to my clinic and on a rectal exam was pretty profound. So for this patient, clearly not having a rectal exam was an issue so. I do recommend again annual rectal exam for patients at risk. And one more thing I think more nuanced approaches is that there's something called a PSA velocity. So over the dynamics, or how PSA changes over year over year. It's another parameter that the doctor should pay attention to. But then again there is more of a nuanced approach. The next question, of course is you know, PSA is a blood test, so the PSA rising or being beyond a certain level tells you that something's going on with your prostate. But it doesn't necessarily tell you where.
One of the areas in which the prostate cancer field has made a huge progress over the last decade or so is so-called targeted biopsies. And really, what this technique involves is imaging of the prostate using the MRI, and based on the MRI findings we'll often find lesions that are not normal and the radiologist using his or her expertise will grade the appearance of the lesion from Group One through Group 5 and these grouping area categories does tell a lot about the potential risk of the patient. They actually having a clinically significant prostate cancer. And here what I mean by clinical significant is that if you leave this alone, this prostate cancer proton life is going to be progressing and actually ultimately compromising the survival or the quality of life of the patient. So in general, based on the MRI findings, if the category is 3 or higher is when the prostate biopsy is recommended. What the more recent studies have shown there's a little more sobering in the sense that it turns out that the MRI is not 100% accurate in predicting as you as are fully over.
Also, is this anything that we do? All this image and still have some sort of a technical engineering type of limitations there, so it’s apparent this is true also for prostate cancer. The MRI is not able to pick up all the lesions, so what the current recommendation for from most urological oncologist? We do the so-called systematic biopsies. We actually divide up the process that into different grids and take the systematic biopsies in addition to that. These targeted biopsies that they’re based on, what the MRI shows, is carried out. That brings up the next issue, which is what is clinically significant. Enough, UN quote, to actually warrant some form of treatment. Many men who get diagnosed with prostate cancer will embark upon a course of watchful waiting or kind of close observation rather than having any kind of active treatment in terms of surgery or other modalities to treat their cancer. How do you make that determination?
So that is also again a depends on there’s two critical. Criteria that you have to assess one is a disease itself and 2nd is a patient’s overall conditions. So I’ll just cover the second part first. Basically, even if the patient has an aggressive prostate cancer. If the patients, let’s say 80 years old, probably it is unlikely that prostate cancer is going to hurt that patient, so more often than not, even if the prostate cancer aggressive in an 80 year old man, I would recommend that probably an observation or surveillance is probably the better route to go. So again, it really depends on the age of the patient. That said, if you’re really looking at prostate cancer biology itself, we divide prostate cancer into three different categories. The low risk, the intermediate risk, and the high risk. So for men with high risk, there is no debate about whether these patients need interventions. Also, with patients who have a low risk disease surveillance,
there’s no debate there. So it’s really the debate is in the intermediate category, and you know who would. Undergo a surveillance or not, and right now there’s a lot of scientific studies going on to address this question. Current standard right now is to use a lot of genomic testing, so we have a couple of platforms out there that’s been approved by the FDA that would like to use to assess the risk of patients having a potentially the cancers are progressing or spreading to other parts of the body in the future. But again, these are sophisticated. Testing again, it should all be interpreted with an experts experience and experts perspective, so this should be all done in consultation with the urologist and for those patients who either are. Advised to pursue more aggressive treatment or choose to do that. What does that look like? I mean, is surgery the mainstay of therapy? Is there a role for neoadjuvant therapy so people getting chemotherapy before surgery?
How does that work?
I'll take your question in in two different segments. Here one is, you know, just giving an overall perspective on treatment. What the available treatments were prostate cancer and then talk about this new ads even or having sort of chemotherapy as part of the region really is in the high risk and advanced disease. in patients you know who are diagnosed with prostate cancer in terms of the decision making. For potential options, there are really 3 broad categories. One is even this alone. Surveillance, by the way, surveillance does not mean that you actually do not monitor the disease. The intent of the surveillance is to continue to monitor the disease, and when that ratio between the risk of intervention versus the benefit of intervention flips in the patient’s favor is when you’re going to actually intervene. So in surveillance context, the patient is not just being ignored, but he still has to pursue. And as you monitor continuously.
That said, then,
with the surveillance being one option,
the second option is radiation,
and third option is in surgery.
If you look at the overall landscape of treatments of being deployed or being utilized in the United States these days, surgeries are done in about 40% of men diagnosed prostate cancer.
Radiation is about 30% to 35% and surveillance about 25 to 30%, so it’s a reasonable even split in terms of the treatments are being used.
Now then, to the point about the potential for a new age event or any sort of combination therapy in the prostate, cancer is unique or is different from other cancer that is exquisitely sensitive to hormones or male testosterone. For this reason, hormonal therapy or androgen deprivation therapy ADT has been contemplated, has been assessed in many trials to see if that can be used in combination with any of these as surgery or radiation.
What the studies have demonstrated in surgical patients it doesn’t make a huge difference,
although again where I work right now as an investigator really interested in this disease space, I am still exploring the use of a more recent agents in the disease space and how that would help or potentially help patients with advanced disease include metastatic prostate cancer. But where did new ads were in or using hormonal therapy before? Intervention has really shown effectiveness. It’s with radiation. The precise mechanism is not quite clear yet, but multiple studies have suggested that the hormonal therapy itself can cause cells to die and potentially immune response can be wrapped up. The other thing is that it can potentially a fragment DNA also, so that then can augment the effect of the radiation. So in general in patients who are contemplating radiation that hormonal therapy should be a significant part of the Truman armamentarium, as again the patients concerned radiation. So then the next question of course, is what factors will prompt somebody to opt for surgery? And can you talk a little bit
about some of the innovations in surgery at the top of the show?
You mentioned that you were very interested in robotic surgery. Tell us a little bit more about that,
so in general, if you look at the data and who would benefit the most from a surgical intervention?
These are patients who are relatively younger who are in generally good health who have long life expectancy. In my practice, I strongly recommend surgery to men with more than 15 years of life expectancy. Again, you have to take a look at assess the patients or general health status and calculate the potential of survival for that patient. So it has to get done in conjunction with in consultation with the patient. But in general. Or healthier patients? I do think that they are gonna benefit a lot better from surgery because in this is in operation they can go in and take the process it out and then patient recovers and you can go on through some of his normal life with really not much risk going or the the nose of significant complications from the operation long term provided that the in the
near term he has recovered all his functions and that is going. That’s a statement that I am putting out there in that. The recovery after operation is where a lot of men fear on because the prostate sits right outside are just external distal to the bladder, and that is where a lot of the important malfunctions, including erectile function, the nerves responsible erectile function runs through. So in this patients again the chance to have the surgery is again. Has to depend on the experience of the operator to surgeon. Where I come in is that I do the robotic surgery and really in my mind this has really mitigated or address a lot of this potential concerns in terms of the complication for that patient. And again that’s another area where the last 10 years we have made a significant and a huge progress in terms of technology and engineering. And as you move forward on the paradigm is shifting where we used to make it big incision and the smaller incisions. And the more recent technology
is so-called the single port prostatectomy technology, where now we’re after this operation. Patients are able to go home because on the same day essentially.

Doctor Isaac Kim is professor and chair of Urology at Yale School of Medicine. If you have questions, the address is canceranswers@yale.edu

and past editions of the program are available in audio and written form at yalecancercenter.org.

We hope you’ll join us next week to learn more about the fight against cancer here on Connecticut Public radio. Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital.